channel; and

the quick paging signal is mapped to an in phase portion of the Walsh channel.

REMARKS

In the Office Action, the Examiner rejected claims 1-10, 15-25, 30-38, 43-53, and 58-60 under 35 U.S.C. 103(a) as being unpatentable over Chen et al. (U.S. Patent No. 5,923,650, "Chen") in view of Ali et al. (U.S. Patent No. 5,896,411, "Ali"). Further, the Examiner objected to claims 11-14, 26-29, 39-42 and 54-57 as being dependent upon a rejected base claim but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claim. In response thereto, the Applicants respectfully traverse the rejections to the claims. In addition, the Applicants have amended claims 2, 3, 19, 20, 30, 33, and 46 to more clearly claim the present invention.

The currently pending claims are directed to three different aspects of the present invention. Claims 1-5, 18-20, and 33 are directed to a first aspect of the present invention, claims 6-14, 21-29, 34-42, and 49-57 are directed to second aspect of the present invention, and claims 15-17, 30-32, 43-48, and 58-60 are directed to a third aspect of the present invention. Applicants' response will be organized in a manner consistent with this claims groupings.

Claims 1-5, 18-20, and 33

Claims 1-5 are directed to a common power control signal embodied on a carrier wave, claims 18-20 are directed to a base station that produces such a power control signal, and claim 33 is directed toward a subscriber unit that receives such a power control signal. Focusing on claim 1, the power control signal includes two elements:

(1) a plurality of power control bits, each power control bit corresponding to a reverse link common channel of the plurality of reverse link common channels and directing a respective subscriber unit to adjust its reverse link transmission power; and

(2) a plurality of inhibit bits, each of the plurality of inhibit bits corresponding to a reverse link common channel of the plurality of reverse link common channels and indicating whether a dedicated burst mode has been scheduled for the reverse link common channel.

The common power control signal is embodied on a carrier wave and transmitted from a base station to a plurality of subscriber units in a code division multiple access wireless communication system. The common power control signal causes the subscriber units to manage their reverse link transmissions on a plurality of reverse link common channels.

The Examiner has cited Chen et al. as teaching "a common power control signal on a carrier wave and transmitted from a base station to a plurality of subscriber units." In particular the Examiner cites Chen at col. 40, lines 6-23 as disclosing "puncture bits (which reads on a plurality of inhibit bits corresponding to a reverse link and indicating whether a dedicated burst mode has been scheduled for the reverse line common channel)".

This characterization of Chen et al. is incorrect and improper. Particularly, Chen et al. addresses the problem of controlling the transmission rate for remote stations. At col. 40, lines 6-23, Chen et al. explicitly states that "messages are transmitted from base station 4 to remote station 6 to convey the maximum scheduled transmission rate. The scheduling delay can be shortened with the use of punctured bits to convey the scheduling information. Instead of waiting for the next frame, base station 4 can replace (puncture) the data bits with the scheduling bits . . . " Chen et al., at this citation, merely teaches that the scheduling information may be punctured into a bit stream that is transmitted to a remote station.

Chen et al. does not teach or disclose the transmission of inhibit bits corresponding to respective reverse link common channels as required by claim 1. In contradistinction of the elements of claim 1 that require power control bits and inhibit bits, Chen et al. discloses the transmission of bits that indicate corresponding maximum scheduled transmission rates.

The Examiner states in the rejection that Chen et al. fails to disclose a plurality of power control bits and cites Ali et al. to overcome this deficiency. As this attorney is well aware, having drafted and prosecuted the cited reference, Ali et al. teaches various manners of closed loop reverse link power control of a mobile station by a base station. However, Ali et al. fails to even address the control of a plurality of common channels via the common power control signal of claim 1. As is clear from the claim language of claim 1, the common power control signal requires a plurality of power control bits, each power control bit corresponding to a reverse link common channel of the plurality of reverse link common channels and directing a respective subscriber unit to adjust its reverse link transmission power. Reverse link common channels are not discussed in Ali et al. nor are the control of transmission power on reverse link common channels. Thus, the limitation is simply not disclosed, suggested, or taught by Ali et al.

For these reasons, the cited references fail to disclose, suggest, or teach the limitations of claim 1 and claim 1 is allowable over these cited references. Further, because independent claims 18 and 33 include the same/similar limitations, the cited references fail to disclose, suggest, or teach the limitations of these claims as well, and claims 18 and 33 are allowable over the cited references. Further, because claims 2-4 depend from claim 1 and because claims 19-20 depend from claim 18, these claims are allowable.

Claims 6-14, 21-29, 34-42, and 49-57

Claims 6-14 are directed to a common power control signal embodied on a carrier wave, claims 21-29 are directed to a base station that produces such a power control signal, claims 34-42 are directed toward a subscriber unit that receives such a power control signal, and claims 49-57 are directed to a method for transmitting power control bits corresponding to such a power control signal. Focusing on claim 6, the power control signal includes two elements:

(1) a first power control/inhibit bit stream that corresponds to a first reverse link common channel; and

(2) a second power control/inhibit bit stream that corresponds to a second reverse link common channel, the second power control/inhibit bit stream offset in relation to the first power control/inhibit bit stream.

The common power control signal is embodied on a carrier wave and transmitted from a base station to a plurality of subscriber units in a code division multiple access wireless communication system. The common power control signal causes the subscriber units to manage their reverse link transmissions on a plurality of reverse link common channels.

The Examiner has cited Chen et al. as teaching "a common power control signal on a carrier wave and transmitted from a base station to a plurality of subscriber units." In particular the Examiner cites Chen et al. at col. 40, lines 6-23 as disclosing "puncture bits (which reads on a plurality of inhibit bits corresponding to a reverse link and indicating whether a dedicated burst mode has been scheduled for the reverse line common channel)". As was described above, for the reasons provided above, this characterization of Chen et al. is incorrect and improper.

The Examiner also cites Chen et al. at col. 2, lines 45-50 as disclosing "a first and second power control/inhibit bit stream of offset from the first power control." Specifically, this portion

of Chen et al. states, "To minimize interference and to maximize the reverse link capacity, the transmit power of each remote station is controlled by two power control loops. The first power control loop adjusts the transmit power of the remote station such that the signal quality, as measured by the energy-per-bit-to-noise-plus-interference ration, $E_b/(N_o+I_o)$, of the signal received at the cell is maintained at a constant level." While this passage generally describes reverse link power control, the passage makes no mention of inhibit bits as required by the elements of claim 6. Thus, the citation of Chen et al. as disclosing this limitation of claim 6 is incorrect and improper.

For these reasons, as well as the reasons cited above, the cited references fail to disclose, suggest, or teach the limitations of claim 6 and claim 6 is allowable over these cited references. Further, because independent claims 21, 34, and 49 include the same/similar limitations, the cited references fail to disclose, suggest, or teach the limitations of these claims as well, and claims 21, 34, and 49 are allowable over the cited references. Further, because claims 7-14 depend from claim 6, because claims 22-29 depend from claim 21, because claims 35-42 depend from claim 34, and because claims 50-57 depend from claim 49, these claims are allowable.

Claims 15-17, 30-32, 43-48, and 58-60

Claims 15-17 are directed to a common power control and quick paging channel embodied on a forward link carrier wave of a Walsh channel in a code division multiple access wireless communication system, claims 30-32 are directed to a base station that produces such a common power control and quick paging channel, claims 43-48 are directed toward a subscriber unit that receives such a common power control and quick paging channel, and claims 58-60 are directed to a method for transmitting the common power control and quick paging channel.

Focusing on claim 15, the power control signal, which is transmitted from a base station to a plurality of subscriber units, includes two elements:

(1) a common power control signal causing the subscriber units to manage their reverse link transmissions on a plurality of reverse link common channels, the common power control signal mapped to a first portion of the Walsh channel; and

(2) a quick paging signal that sends pages to the plurality of subscriber units, the quick paging signal mapped to a second portion of the Walsh channel.

The Examiner has cited Chen et al. as teaching "a common power control signal on a carrier wave and transmitted from a base station to a plurality of subscriber units." In particular the Examiner cites Chen et al. at col. 40, lines 6-23 as disclosing "puncture bits (which reads on a plurality of inhibit bits corresponding to a reverse link and indicating whether a dedicated burst mode has been scheduled for the reverse line common channel)". As was described above, for the reasons provided above, this characterization of Chen et al. is incorrect and improper.

The Examiner also cites Chen et al. at col. 7, lines 5-10 as disclosing "common power control on a forward link carrier wave of a Walsh channel in a cdma system a common power signal and a (interleaved bits into another signal space)." While this portion of Chen et al. discloses the Walsh code mapping of groups of bits, it does not disclose the mapping of a common power control signal to a first portion of a Walsh channel and the mapping of a quick paging signal into a second portion of the Walsh channel. Thus, the citation of Chen et al. as disclosing this limitation of claim 15 is incorrect and improper.

For these reasons, as well as the reasons cited above, the cited references fail to disclose, suggest, or teach the limitations of claim 15 and claim 15 is allowable over these cited references. Further, because independent claims 30, 43, and 58 include the same/similar

limitations, the cited references fail to disclose, suggest, or teach the limitations of these claims as well, and claims 30, 43, and 58 are allowable over the cited references. Further, because claims 16-17 depend from claim 15, because claims 31-32 depend from claim 30, because claims 44-48 depend from claim 43, and because claims 57-60 depend from claim 58, these claims are allowable.

Thus, pending claims 1-60 are now allowable. A Notice of Allowance is courteously solicited. Please direct any questions to the undersigned attorney.

Respectfully submitted,

Date: March 21, 2003

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